Restenosis

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Restenosis literally means the *re*occurrence of *stenosis*. This is usually **restenosis** of an artery, or other blood vessel, but possibly any hollow organ that has been "unblocked". This term is common in vascular surgery, cardiac surgery, interventional radiology, or interventional cardiology following angioplasty, all branches of medicine that frequently treat stenotic lesions.

Coronary restenosis

There are probably several mechanisms that lead to **restenosis**. An important one is the inflammatory response, which induces tissue **proliferation** around an angioplasty site.

Cardiologists have tried a number of approaches to decrease the risk of **restenosis**. Stenting is becoming more commonplace; after balloon angioplasty, a metal mesh is pressed against the wall of the artery that has been opened, decreasing the risk of **restenosis**. Other approaches include local radiotherapy and the use of immunosuppressive drugs, coated onto the stenting mesh. Analogues of rapamycin, such as tacrolimus (FK-506), sirolimus and more so everolimus, normally used as immunosuppressants but recently discovered to also inhibit the **proliferation** of vascular smooth muscle cells, have appeared to be quite effective in preventing **restenosis** in clinical trials. Antisense knockdown of c-myc, a protein critical for progression of cell replication, is another approach to inhibit cell **proliferation** and is undergoing clinical trials in Europe using Morpholino oligos.

External links

- **Restenosis** -- Angioplasty.Org (http://www.angioplasty.org/devices6.html)

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Category: Surgery